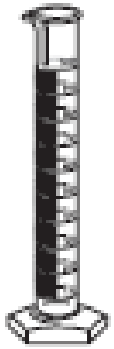
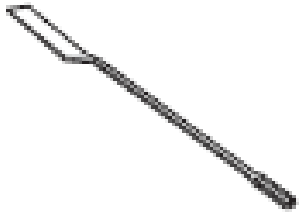
9/14 Warm-Up – How many can you name without checking your notes?

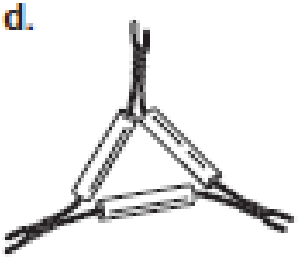
CHEMICAL APPARATUS

Identify each piece of apparatus. Place your answers in the spaces provided.

a. 

b. 

c. 

d. 

e. 

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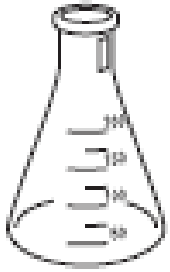
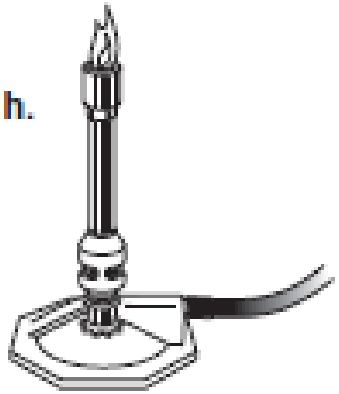
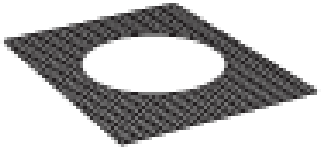
g. 

h. 

i. 

j. 

k. 

l. 

September

Pass in Chemistry Intro Homework.

Chemistry Agenda

- Unit 1 Properties and Changes in Matter

1. Notes – lined paper
2. Matter vs. Not Matter - groups
3. Lab: States of Matter simulation lab
4. If time begin your homework

Objective: Students will examine the behavior of particles in solids, liquids, and gases and the Kinetic Molecular Theory though completing a PhET simulation lab on the classroom computers

Unit 1 Properties of Matter

Part I. States of Matter

Part II. Classification of Matter

Part III. Properties of Matter

Chemistry is...

The study of matter

Activity

- 12 groups
- Matter vs. Not Matter
- 6 stations to visit

Matter vs. NOT MATTER.

. Describe the characteristics all the items you classified as *MATTER* have in common that make them different from the items you classified as *NOT MATTER*.

Chemistry

The study of matter

Its properties

Its composition

Its structure

The changes it undergoes

Unit 1-Properties of Matter

Part I. States of Matter

- Kinetic Molecular Theory
- States of Matter
- Energy Changes

A. Kinetic Molecular Theory

- **All matter is made up of particles**
  - Particles of matter are always in motion.
  - The kinetic energy (speed) of these particles increases as temperature increases.

State of Matter

- You will now carry out an investigation into the behavior of particles (atoms or molecules) in various states of matter
- We will start with some predictions and then use a PhET simulation to complete the lab

B. Four States of Matter

- **Solids**
  - very low KE - particles vibrate but can't move around
  - fixed shape
  - fixed volume

B. Four States of Matter

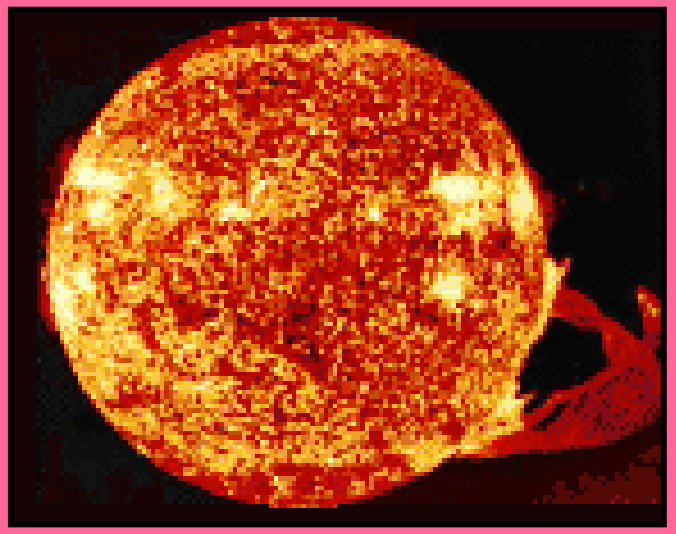
- **Liquids**
  - low KE - particles can move around but are still close together
  - variable shape
  - fixed volume

B. Four States of Matter

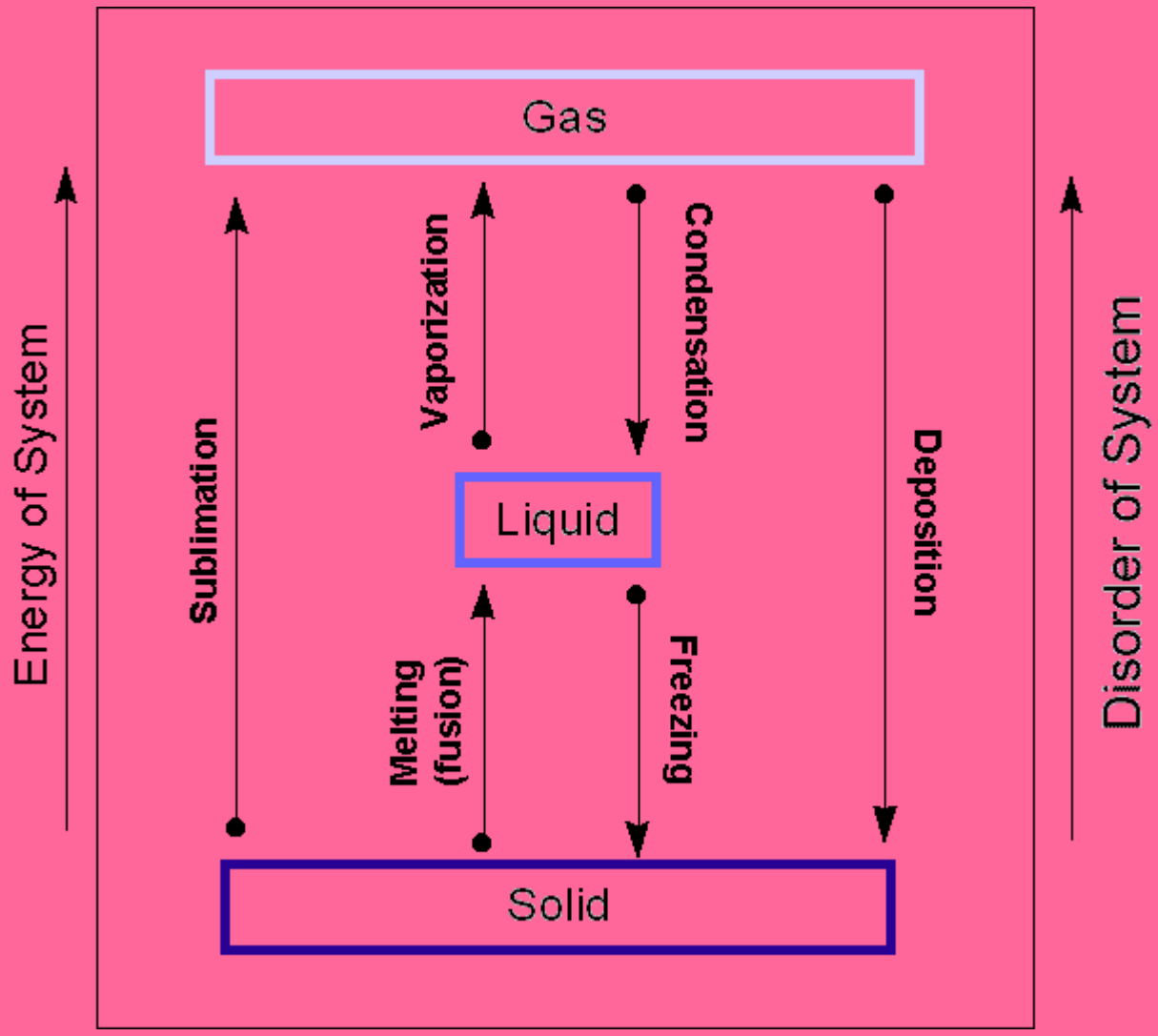
- **Gases**
  - high KE - particles can separate and move throughout container
  - variable shape
  - variable volume

B. Four States of Matter

- **Plasma**
  - very high KE - particles collide with enough energy to break into charged particles (+/-)
  - gas-like, variable shape & volume
  - stars, fluorescent light bulbs, CRTs



C. Changes of State



C. Energy Changes in Matter

- when any change occurs, energy is always involved
- energy can be in different forms (light, heat, etc.)
- energy is never destroyed or created (law of conservation of energy)

Energy Changes in Matter

- Exothermic change- change that gives off energy (feels warm on outside)

- Endothermic Change- change that uses up energy (feels cold on outside)

Video States of Matter with worksheet from discovery school